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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Revision of the Commission's Rules)
To Ensure Compatibility with)
Enhanced 911 Emergency Calling Systems)

CC Docket No. 94-102

To: The Commission

Wireless Communications Venture Petition for a Limited Waiver of Sections
20.18(e) and (g) of the Commission's Rules

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SUMMARY

Wireless Communications Venture (“WCV”) seeks a limited waiver of the Federal Communications Commission’s rules governing the timeframes for deployment of Phase II E911 services. WCV has chosen a hybrid-based automatic location identification (“ALI”) solution for its Nortel network. Unfortunately, vendor delays in the availability of Phase II compliant network solutions and Phase II capable handsets have made compliance with Section 20.18(g)(1)(i) impossible to date, and make such compliance by October 2001 in most of WCV’s service area improbable if not unattainable.

Due to the unavailability of ALI-capable handsets, WCV does not expect to be capable of selling and activating handsets prior to January 2003. Accordingly, WCV requests that the deadline for WCV to begin selling and activating handsets be extended to January 1, 2003, the 25 percent benchmark be extended until March 31, 2003, that the 50 percent benchmark be extended until September 30, 2003, and that the 100 percent benchmark be extended until March 31, 2004. WCV also requests that the 95 percent penetration rate deadline be extended until March 31, 2007.

Grant of the requested waiver is consistent with both the public interest and the underlying purpose of the Commission’s Phase II rules. Denial of the requested waiver would be inequitable. The lack of availability of ALI-capable handsets leaves WCV with no reasonable alternative other than the filing of this limited waiver.

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**Wireless Communications Venture Petition for Limited Waiver of Sections 20.18(e)
and (g) of the Commission's Rules**

Wireless Communications Venture ("WCV"), pursuant to Sections 1.3 and 1.925 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission"),¹ hereby requests a limited and temporary waiver of Section 20.18(e) and (g) of the Commission's rules.² WCV is fully committed to providing E911 location capability to meet the emergency needs of its customers and continues to devote substantial resources and personnel to its pursuit of Phase II E911 ("Phase II") compliance. However, deployment of Phase II capability has been particularly difficult for WCV due to obstacles it has faced in its attempts to obtain the Phase II handset, cell site, network signaling, switching and location equipment, and software upgrades necessary to make Phase II a reality prior to the Commission's October 1, 2001 deadline. Specifically, vendor delays in the availability of Phase II compliant network solutions and Phase II capable handsets have made compliance with Section 20.18(g)(1)(i) impossible to date, and make such compliance by October 2001 in most of WCV's service area improbable if not unattainable. Without the general availability of Phase II

¹ 47 C.F.R. §§ 1.3 and 1.925.

² 47 C.F.R. §§ 20.18(e) and (g).

equipment, WCV will be unable to meet the October 1, 2001 deadline in most of its service area and respectfully requests an extension as outlined below.³

I. WCV Is Unable to Meet the FCC's October 1 Handset Availability Deadline Due to Factors Outside of Its Control

WCV is a small, broadband PCS carrier providing service in rural Minnesota (BTA 391 in St. Cloud, Minnesota). WCV has been working diligently with its main supplier, Nortel, to develop a Phase II solution for its service area. As WCV reported in its November 9, 2000 report, WCV has been exploring a hybrid solution for its CDMA operation to be provided by Nortel. The technology uses both cell sector identification and Global Positioning System ("GPS") technology. The location technology also uses a locating function within or as an overlay to the wireless network infrastructure using a combination of Time Difference of Arrival ("TDOA") and Angle of Arrival ("AOA") functions. WCV's Phase II solution will require a new software load in its switch, hardware upgrades, that it shares with Cellular Mobile Systems of St. Cloud, LLC, hardware changes consisting of a new processor for its switch and assorted cell site upgrades, as well as automatic location information ("ALI")-capable handsets. As discussed in detail below, vendor-associated delays in delivery of each of these elements will prevent WCV from meeting its relevant Phase II deadlines in the vast majority of its service area.

WCV has ordered an upgrade to its software in the form of the Nortel MTX09 feature addition and will add location center hardware in order to transmit Phase II data

³ WCV plans to use a network-based solution in the few areas of its rural network where cell site density might make a network-based solution technically possible. In such areas, WCV does not anticipate that a waiver will be necessary. WCV notes that it has yet to receive, nor does it expect to receive in the near future, a Phase II request from the Public Safety Answering Points ("PSAP") that it serves.

to PSAPs.⁴ According to its latest timeline,⁵ Nortel promises that the MTX09 upgrade will be delivered in December 2001. However, Nortel will not begin testing of the upgrade and related equipment until February 2002. WCV is also upgrading its mobile switch as part of its efforts and Nortel expects to have the new switch functioning by March 15, 2002.⁶ Accordingly, absent unexpected advances in Nortel's schedule, WCV does not anticipate having the ability to process Phase II data until April 2002 at the earliest.

WCV has investigated the potential product offerings of many different Phase II vendors in addition to Nortel, including those offered by Tendler, SCC Communications, Technocom Corporation, GTE Telecommunications Services, Cell-Loc, True Position, US Wireless, and SigmaOne Communications Corporation. WCV has selected Nortel based on its network's compatibility with Nortel products and because the Nortel product appears to be the most robust solution available at the earliest date.

To meet the Commission's ALI requirements, WCV also requires an upgrade to its hardware infrastructure in the form of its Nortel processor. Based on WCV's previous experiences, delays in the delivery of hardware can last up to nine months after such hardware first becomes available.⁷ Additionally, several wireless carriers have reported

⁴ In general, the following hardware and software is needed to transmit Phase II data to PSAPs: IS41C – Dialed Number Trigger, E911 Software, MPC – Mobile Positioning Center, PDE – Position Determining Entity, and receivers at each cell site.

⁵ See Attachment 1.

⁶ *Id.*

⁷ WCV's experiences are consistent with those of other carriers. See, e.g., Inland Cellular Petition for Waiver at 6 (small carriers can expect to see generally available technology six to nine months after vendors deliver ALI-capable technology to the large, nationwide carriers). As Inland Cellular pointed out in its waiver petition, small carriers face "unique difficulties and obstacles" when attempting to contact national vendors. Inland Cellular Petition for Waiver at 1.

in their Phase II waiver petitions that Nortel, WCV's switch and network equipment vendor, will not have the necessary upgrades ready until the end of Q1 2002 or the beginning of Q2 2002.⁸ After successful installation of the necessary equipment, WCV will have to test all of the upgrades – a process that generally takes six to eight weeks.⁹ With the unsated demand for Phase II technology building and the large nationwide carriers competing for equipment, WCV does not realistically expect delivery of the necessary Phase II hardware until at least nine months after the products first appear on the market.¹⁰ In fact, even large carriers are reporting six-month lags between the availability of equipment and delivery, installation, and testing.¹¹

While WCV will be unable to process Phase II data without the Nortel upgrade, it is the unavailability of ALI-capable handsets that is likely to cause the most serious delays to WCV's Phase II compliance plans. WCV plans to integrate the Nortel network upgrades with ALI-capable handsets. Unfortunately, as discussed below, WCV's Phase II upgrade efforts have been stymied by a general lack of availability of ALI-capable handsets.

As a small carrier without substantial market clout with vendors, WCV is forced, in many cases, to base its handset plans on second-hand information on product delivery dates and details of what products will be available for purchase. Even Western Wireless, a huge rural carrier in comparison with WCV, notes that it “does not have the clout to dictate the production of new handsets with [ALI] capability.”¹² This process

⁸ See, e.g., Qwest Petition for Waiver at 16.

⁹ *Id.*

¹⁰ See, e.g., Inland Cellular Petition for Waiver at 6.

¹¹ See, e.g., Cingular Petition for Waiver at 27.

¹² See Western Wireless Petition for Waiver at 12.

makes it difficult for WCV to accurately predict the date when it can begin selling ALI-capable handsets to its customers. WCV understands that the only manufacturer of currently available CDMA ALI-capable chipsets is QUALCOMM, and that Nokia is not far behind with its own proprietary CDMA technology. However, most handset manufacturers using the QUALCOMM chipsets, with the exception of Samsung, have not incorporated an ALI-capable QUALCOMM chipset into their phones. Unfortunately, the Samsung product with the ALI-capable QUALCOMM MSM3300 chipset requires a minimum order volume that WCV, as an extremely small carrier, cannot meet.¹³ WCV is considering CDMA handsets from Motorola (scheduled to be first available in September 2002), Kyocera (June 2002), and Nokia (December 2002), and intends to purchase the first set of handsets that becomes available.

Like many ALI technology vendors, Tendler has noted that it would be delighted to sell its ALI technology if it were readily available. Unfortunately, not only is the Tendler handset solution unavailable at this time, but large carriers are placing orders, pushing small carriers such as WCV to the back of the line. Even if Tendler were able to commit to a general availability date for its equipment, the economic incentive for Tendler to fill 500,000 Verizon orders rather than a few thousand for WCV will most certainly lead to additional delays beyond any such date. WCV, based on its experiences and confirmed by other small carriers,¹⁴ expects a six to nine month delay after vendors first deliver ALI-capable handset technology to the large, nationwide carriers before such equipment is made available to WCV.

¹³ See, e.g., ALLTEL Petition for Waiver at 14-15.

¹⁴ See, e.g., Inland Cellular Petition for Waiver at 6.

In addition to the Samsung product, WCV is aware of one other handset solution that may be commercially available. According to Airbiquity's testimony to Congress, its ALI product is commercially available. WCV has investigated the Airbiquity solution, and has ruled it out based on its cumbersome technical attributes. First, the Airbiquity product appears to be capable of working only with certain model Nokia products – products that WCV will most likely discontinue as it acquires new CDMA handsets. Second, the Airbiquity product is essentially a stand-alone GPS product that is about the same size as, and the same cost as, a regular handset that is attached/jerry-rigged to the Nokia product. Third, Airbiquity's solution uses exposed contacts on the bottom of the Nokia phone that will not work should Nokia alter the design of its product. Since sleek, consumer-friendly handsets will be available soon after WCV upgrades the network, software, and hardware components of its Nortel network, the outmoded Airbiquity product is not a practical solution.

WCV, like many carriers that serve rural areas, has ruled out a purely network-based Phase II solution.¹⁵ WCV's investigation of network-based solutions has confirmed that triangulation-based location solutions do not work well in less densely populated rural areas, where cell sites are scarce. In fact, the Commission has confirmed the "distinct challenges" that rural carriers such as WCV face in implementing Phase II requirements.¹⁶ WCV will use TDOA and AOA where it can,¹⁷ but must rely heavily on ALI-capable handsets to meet the FCC's Phase II accuracy standards. In the WCV

¹⁵ See, e.g., AT&T Petition for Waiver at 33.

¹⁶ See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Fifth Memorandum Opinion and Order, 15 FCC Rcd. 22810, ¶ 21 (2000) ("*Fifth MO&O*").

¹⁷ As discussed above, WCV hopes to use a network-based solution where cell site density in WCV's rural network makes TDOA and AOA possible.

network, an E911 caller is not always within the range of multiple cells. In addition, many of WCV's cell sites are spaced in straight lines (by roadways, for example), making triangulation a geometric impossibility.¹⁸ WCV will continue to work with Nortel on its hybrid solution, but cannot achieve full Phase II compliance in the majority of its service area without ALI-capable handsets.

II. WCV Satisfies the Relevant Standards for Waiver of the Commission's Rules

Under Section 1.3 of its rules, the Commission may waive any provision of its rules if good cause is shown.¹⁹ The Commission must take a "hard look"²⁰ and then decide if such a waiver is in the public interest.²¹ The Commission has already recognized that wireless carriers may face difficulties in meeting the October 1, 2001 deadline to comply with Sections 20.18 (e) and (g) of its rules. In the FCC's *Fourth Memorandum Opinion and Order* ("Fourth MO&O"),²² the Commission recognized that there would be instances when "technology-related issues" or "exceptional circumstances" would cause a delay in a wireless carrier's ability to meet the October 1, 2001 deadline to become Phase II compliant.²³ Such recognition is consistent with the Commission's acknowledgement that "bringing a new product to market requires

¹⁸ See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Third Report and Order, 14 FCC Rcd. 17388, ¶ 23 (1999) ("Third R&O").

¹⁹ 47 C.F.R. § 1.3.

²⁰ *Wait Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

²¹ *Northeast Cellular Telephone Company, L.P., et al v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

²² *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Fourth Memorandum Opinion and Order*, 15 FCC Rcd. 17442 (2000) ("Fourth MO&O").

²³ *Id.* at ¶ 43.

manufacturers to undertake a time-consuming series of complex steps.”²⁴ Manufacturers, although racing to meet carrier demand, have yet to overcome the technological complexities in order to make ALI-capable handsets available in time for carriers to meet the FCC’s deadlines. The requested waiver is consistent with the Commission’s recognition that compliance deadlines should be linked to the availability of manufacturer equipment.²⁵

The Commission also indicated that a petition for waiver must be “specific, focused and limited in scope, and with a path to full compliance.”²⁶ WCV’s waiver petition is specific, narrow in scope, and provides the Commission with WCV’s past efforts and future plans to satisfy the FCC’s Phase II requirements. Moreover, as set forth below, the instant petition satisfies the applicable waiver standards.

Section 1.925(b)(3) of the Commission’s rules sets out the general standards for determining when a waiver should be granted in Wireless Telecommunications Bureau proceedings:

The Commission may grant a request for waiver if it is shown that:

- (i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or
- (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable,

²⁴ GARMIN International, Inc., *Order on Reconsideration*, DA 01-851 at ¶ 5.

²⁵ See, e.g., *Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 9 FCC Rcd. 1981 ¶¶ 76-77 (1994) (modifying a proposed compliance deadline to account for the unavailability of necessary equipment).

²⁶ *Fourth MO&O* at ¶ 44.

unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.²⁷

Under both of these standards, grant of the requested waiver is warranted.

Application of the Section 20.18(g) handset deadline to WCV would be inequitable in light of the lack of availability of ALI-capable handsets, a factor outside of WCV's control. The unavailability of such handsets, combined with the technical incompatibility of a network-based solution in the vast majority of its service area, leaves WCV with no reasonable alternative but to seek a waiver.

Grant of the requested waiver is consistent with both the public interest and the underlying purpose of the Commission's Phase II rules in Section 20.18. The Commission's extension of the original March 1, 2001 implementation date to October 1, 2001 balanced the need for an expeditious rollout of Phase II services with the Commission's recognition that Phase II chip manufacturers such as Qualcomm had been experiencing delays, making compliance by the original deadline infeasible.²⁸ In setting the October 1 deadline, the FCC relied on the anticipated availability of the necessary equipment. As discussed herein, it is now clear that the handset equipment required to meet the October 1 deadline will not be available in time to allow WCV to meet this deadline. A temporary limited waiver of Section 20.18(g)(1)(i) is entirely consistent with the underlying purpose of the establishment of the October 1 deadline.

III. Schedule for Compliance

WCV requests a waiver, based upon the following timetable, of the FCC's October 1, 2001 deadline to "begin selling and activating" handsets and the

²⁷ 47 C.F.R. § 1.925(b)(3).

²⁸ *Fourth MO&O* at ¶ 33.

Commission's related benchmark deadlines contained in Section 20.18(g). WCV's schedule is based on its experiences and contacts with vendors and publicly available information regarding handset availability. Based upon its own inquiries and confirmed in other carriers' waiver requests,²⁹ WCV believes the earliest and most optimistic date by which the large, nationwide carriers will see delivery of ALI-capable CDMA handsets is by June 2002.³⁰ Accounting for expected delays before CDMA handsets reach a small carrier such as WCV and necessary testing,³¹ WCV does not expect to be capable of selling and activating handsets prior to January 2003. While WCV hopes to begin selling and activating handsets prior to January 2003, WCV has no firm basis to believe that it will have the necessary handsets prior to this date.³² Accordingly, WCV requests that the deadline for WCV to begin selling and activating handsets be extended to January 1, 2003, the 25 percent benchmark be extended until March 31, 2003, that the 50 percent benchmark be extended until September 30, 2003, and that the 100 percent benchmark be extended until March 31, 2004. WCV also requests that the 95 percent penetration rate deadline be extended until March 31, 2007.

²⁹ See, e.g., Qwest Petition for Waiver at 15.

³⁰ Kyocera indicated that it will have equipment available by that date.

³¹ WCV notes that testing typically takes approximately six weeks. Without the necessary time to fully test a solution, or without the proper technology for WCV's rural region, WCV's Phase II solution could fail, undermining public confidence in wireless E911. WCV does not want to offer the sense of security that the offering of Phase II location technology will ultimately provide until it has a proven system. A rushed and inoperable system will not benefit the public.

³² WCV is particularly hopeful that Samsung will eventually make its handsets available to smaller carriers in a timely manner. However, in light of Samsung's refusal to make its equipment available to WCV to date, WCV cannot base its compliance schedule on the availability of Samsung products.

IV. Conclusion

Based on the foregoing, WCV respectfully requests that the Commission grant WCV a temporary waiver of Sections 20.18(e) and (g) of its rules and permit WCV to implement the handset component of its Phase II solution based on the schedule set forth herein.

Respectfully submitted,

**WIRELESS
COMMUNICATIONS VENTURE**

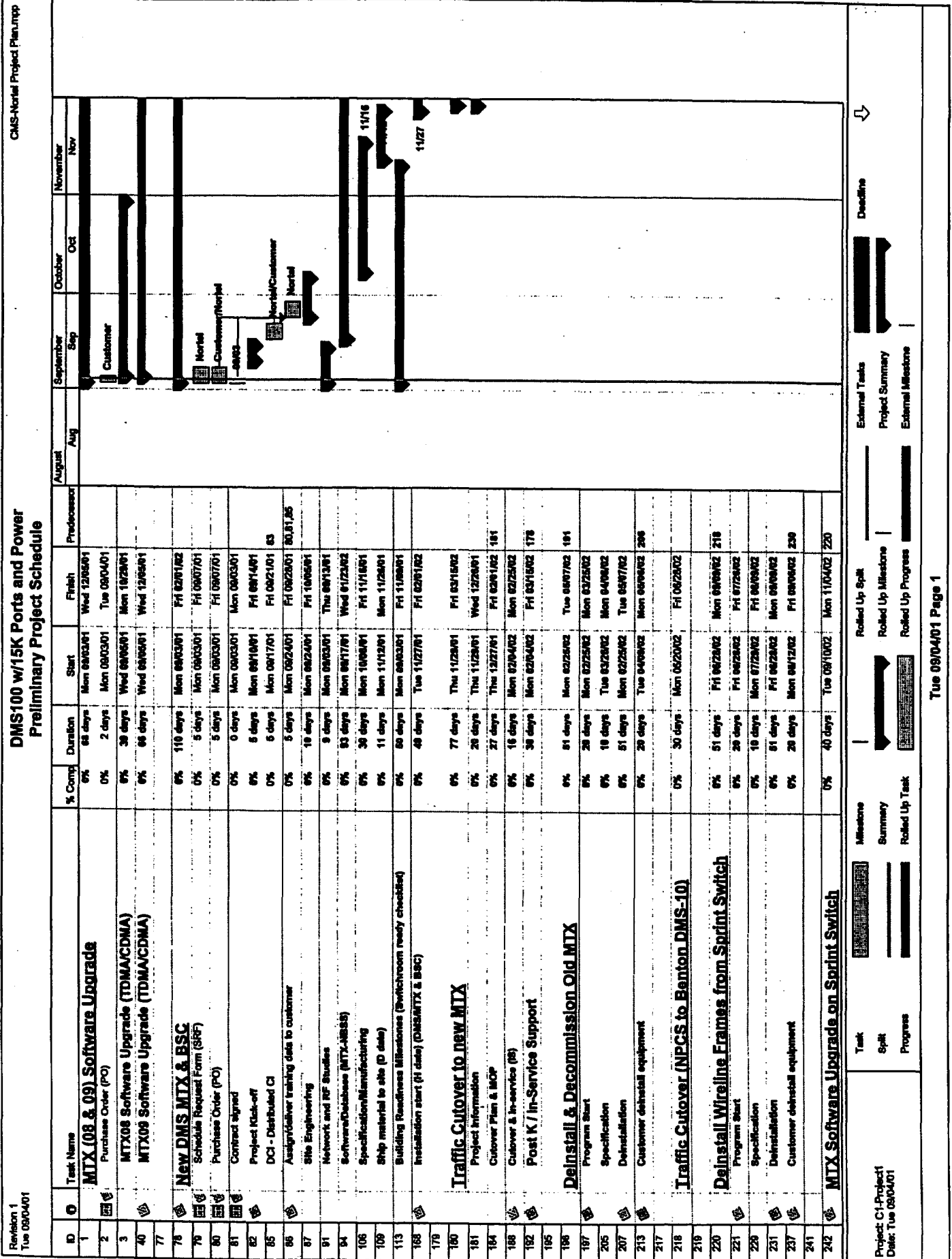
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ITS ATTORNEYS

Dated: September 18, 2001

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ATTACHMENT 2

-----Original Message-----

From: Palacios Michael (NMP/Dallas) [mailto:Michael.Palacios@nokia.com]
Sent: Monday, September 10, 2001 11:32 AM
To: snies@cell-2000.com
Cc: Clayton Chris (NMP-Sales/Dallas)
Subject: FW: E-911 Capabilities/GPS handsets

Hello Shannon,

Chris asked me to fill you in on your question about availability of GPS handsets with E911 location functionality.

Nokia Mobile Phones is committed to working with our carrier customers to provide solutions that meet the E911 Phase 2 mandate. We had in the past actively pursued development of a GPS SAMPS solution for one of our TDMA handset development programs. More recently, we have put this development on hold. In our assessment of the viability of handset based Phase 2 solutions (GPS/SAMPS) for TDMA systems, we have determined that including the GPS/SAMPS functionality in the upcoming handset would not be practical. We based this conclusion on a number of factors, including 1) lack of stated SAMPS support from infrastructure vendors, 2) little to no interest from the greater TDMA market for handset based E911 solutions, 3) low interest and commitment from the carrier community in general for handset-based GPS solutions, and 4) the general movement within the carrier community towards other types of E911 Phase 2 solutions.

At this time, therefore, we have no near-term handset offering that satisfies E911 Phase 2 requirements for TDMA networks employing a handset based location solution. If market factors change the current environment, however, we are certainly amenable to re-investigating handset products with GPS functionality. In the interim, we continue to support technologies such as E-OTD for E911 location solutions.

Nokia is committed to providing you the best support and products possible; if you have comments or suggestions, please feel free to provide input. Please also be aware that information stated or referred to in connection with this description of Nokia's products is not a binding obligation for Nokia; this description is a reasonable estimate only. Product plans, related time scales, and other information are based upon our current understanding of existing standards, technologies and market situations, and upon our internal plans for the development and supply of terminals for sale to the open market. Because standards, technology and market situations may change, our plans are also subject to change. Final product deployment may include different features, different technologies and different timelines.


I hope the information above answers your question. If we can be of assistance by supporting a request for an extension from the FCC, or if you have further questions, please do not hesitate to contact me at any time.

Michael Palacios
Business Development Manager
Emerging Technologies
Nokia Mobile Phones
(972) 374 0688

DECLARATION OF WILLIAM CASTO

I, William Casto, do hereby declare under penalty of perjury the following:

1. I am the General Manager of Wireless Communications Venture.
2. I have read the foregoing "Petition for Limited Waiver of Sections 20.18(e) and (g) of the Commission's Rules." I have personal knowledge of the facts set forth therein, and believe them to be true and correct.



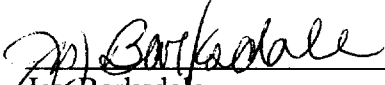
William Casto

9/17/01

Date

CERTIFICATE OF SERVICE

I, Joy Barksdale, do hereby certify that on this 18th day of September 2001, a copy of the foregoing Petition for Limited Waiver of Sections 20.18(e) and (g) of the Commission's Rules was served by hand delivery to the following parties:


Joy Barksdale

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